1. General Description

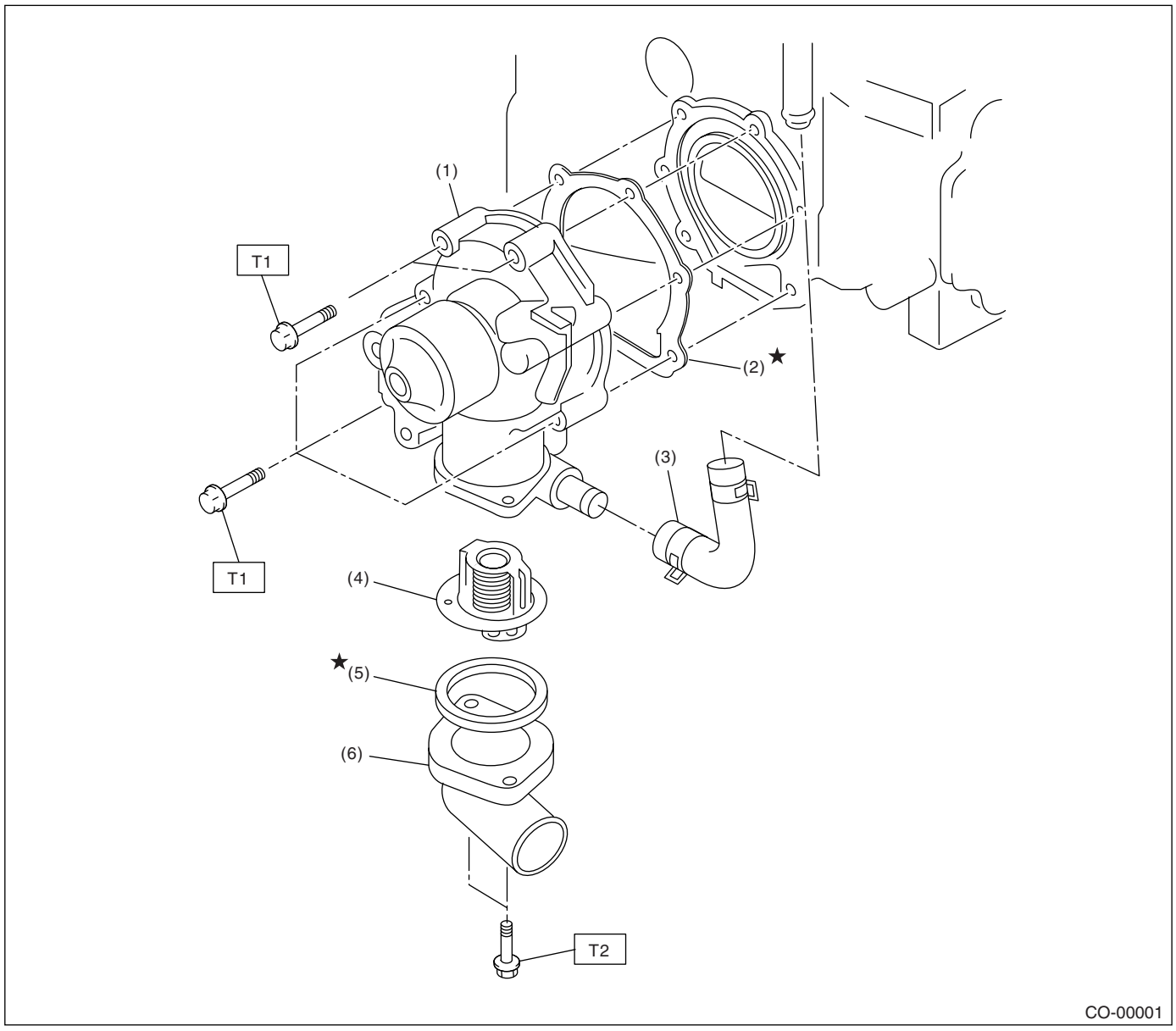
A: SPECIFICATIONS

Model			Non-turbo	Turbo
Cooling system			Electric fan + Forced engine coolant circulation system	
Total engine coolant capacity ℓ (US qt, Imp qt)			AT: Approx. 6.8 (7.19, 5.98) MT: Approx. 6.9 (7.29, 6.07)	AT: Approx. 7.3 (7.71, 6.42) MT: Approx. 7.4 (7.82, 6.51)
Water pump	Type		Centrifugal impeller type	
	Discharge performance I	Discharge	20 ℓ (5.3 US gal, 4.4 Imp gal)/min.	
		Pump speed — Discharge pressure	760 rpm — 2.9 kPa (0.030 kgf/cm^2, 0.42 psi)	
		Engine coolant temperature	85°C (185°F)	
	Discharge performance II	Discharge	100 ℓ (26.4 US gal, 22.0 Imp gal)/min.	
		Pump speed — Discharge pressure	3,000 rpm — 49.0 kPa (0.50 kgf/cm^2, 7.1 psi)	
		Engine coolant temperature	85°C (185°F)	
	Discharge performance III	Discharge	200 ℓ (52.8 US gal, 44.0 Imp gal)/min.	
		Pump speed — Discharge pressure	6,000 rpm — 225.4 kPa (2.298 kgf/cm^2, 32.69 psi)	
		Engine coolant temperature	85°C (185°F)	
	Impeller diameter		76 mm (2.99 in)	
	Number of impeller vanes		8	
	Pump pulley diameter		60 mm (2.36 in)	
	Clearance between impeller and case	Standard	0.5 — 0.7 mm (0.020 — 0.028 in)	
		Limit	1.0 mm (0.039 in)	
	"Thrust" runout of impeller end		0.5 mm (0.020 in)	
Thermostat	Type		Wax pellet type	
	Starts to open		76 — 80°C (169 — 176°F)	
	Fully opened		91°C (196°F)	
	Valve lift		9.0 mm (0.354 in) or more	
	Valve bore		35 mm (1.38 in)	
Radiator fan	Motor	Main fan	70 W	120 W
		Sub fan	70 W	120 W
	Fan diameter × Blade		320 mm (11.81 in) × 5 (main fan) 320 mm (11.81 in) × 7 (sub fan)	
Radiator	Type		Down flow, pressure type	
	Core dimensions	Width × Height × Thickness	691.5 × 360 × 16 mm (27.22 × 14.17 × 0.63 in)	
	Pressure range in which cap valve is open		Above: 108±15 kPa (1.1±0.15 kgf/cm^2, 16±2 psi) Below: −1.0 to −4.9 kPa (−0.01 to −0.05 kgf/cm^2, −0.1 to −0.7 psi)	
	Fins		Corrugated fin type	
Reservoir tank	Capacity		0.5 ℓ (0.5 US qt, 0.4 Imp qt)	

B: COMPONENT

1. WATER PUMP

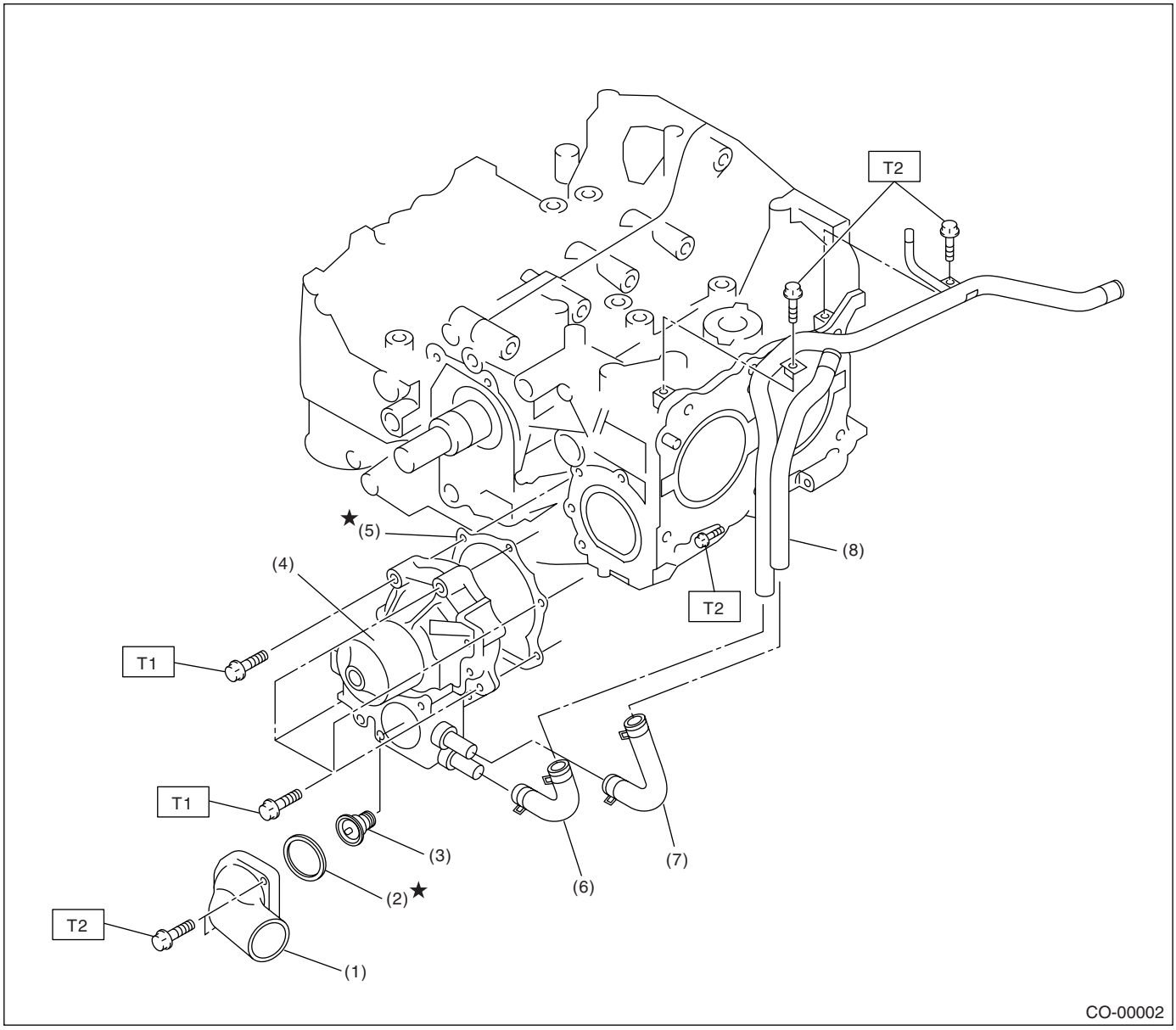
• NON-TURBO MODEL



(1) Water pump ASSY
(2) Gasket
(3) Heater by-pass hose
(4) Thermostat
(5) Gasket
(6) Thermostat cover

Tightening torque: N·m (kgf-m, ft-lb)
T1: First 12 (1.2, 8.7)
Second 12 (1.2, 8.7)
T2: 6.5 (0.66, 4.8)

• TURBO MODEL

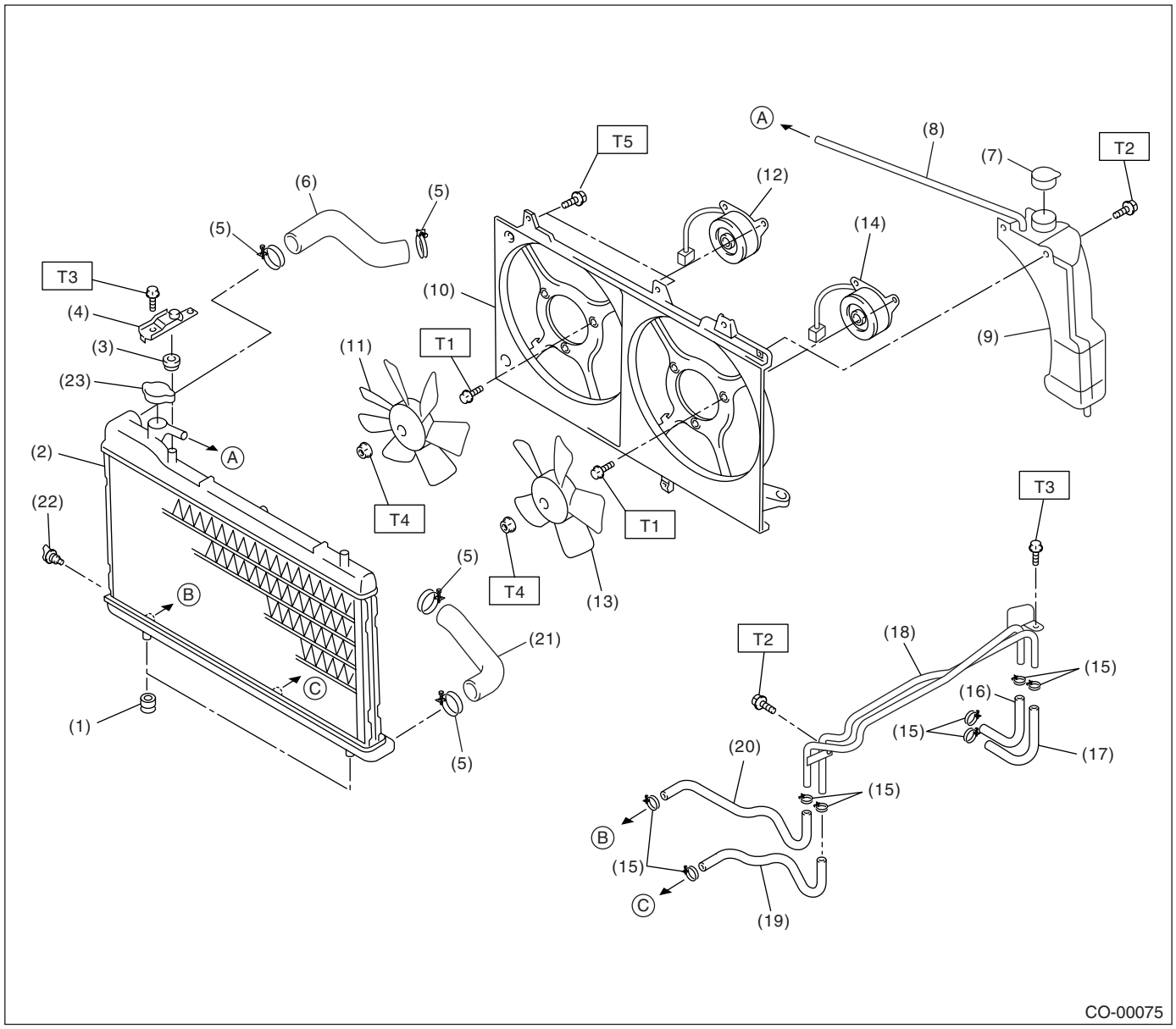


(1)	Thermostat cover	(5)	Gasket
(2)	Gasket	(6)	Heater by-pass hose
(3)	Thermostat	(7)	Coolant filler tank by-pass hose
(4)	Water pump ASSY	(8)	Water by-pass pipe

Tightening torque: N·m (kgf-m, ft-lb)
T1: First 12 (1.2, 8.7)
Second 12 (1.2, 8.7)
T2: 6.5 (0.66, 4.8)

2. RADIATOR AND RADIATOR FAN

• NON-TURBO MODEL



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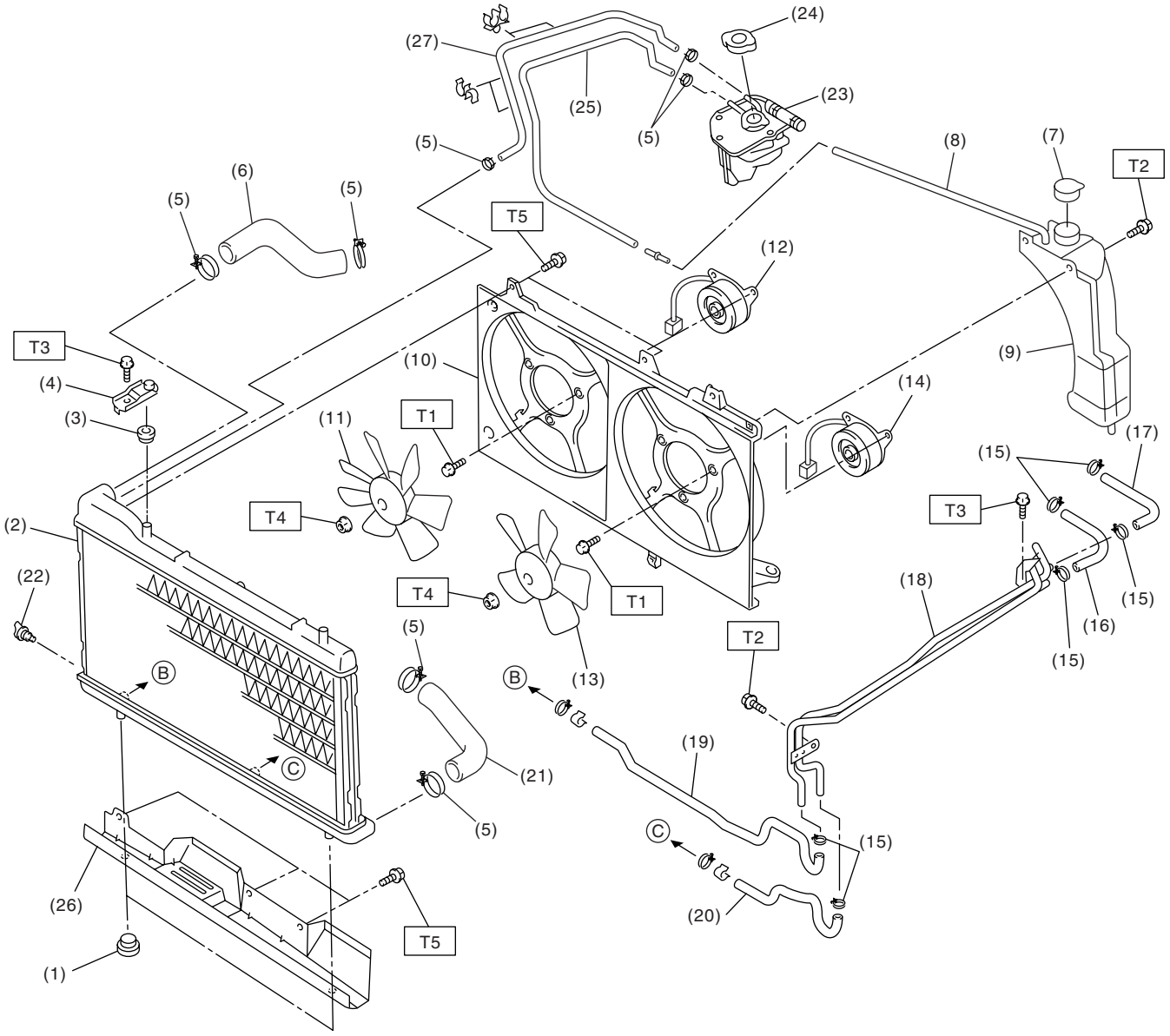
(1)	Radiator lower cushion	(11)	Radiator sub fan	(21)	Radiator outlet hose
(2)	Radiator	(12)	Radiator sub fan motor	(22)	Radiator drain plug
(3)	Radiator upper cushion	(13)	Radiator main fan	(23)	Radiator cap
(4)	Radiator upper bracket	(14)	Radiator main fan motor		
(5)	Clamp	(15)	ATF hose clamp (AT model)		
(6)	Radiator inlet hose	(16)	ATF inlet hose A (AT model)		
(7)	Engine coolant reservoir tank cap	(17)	ATF outlet hose A (AT model)		
(8)	Overflow hose	(18)	ATF pipe (AT model)		
(9)	Engine coolant reservoir tank	(19)	ATF inlet hose B (AT model)		
(10)	Radiator sub fan shroud	(20)	ATF outlet hose B (AT model)		

Tightening torque: N·m (kgf-m, ft-lb)	
T1:	*4.4 (0.45, 3.3)*
T2:	*7.5 (0.76, 5.5)*
T3:	*18 (1.8, 13.0)*
T4:	*3.4 (0.35, 2.5)*
T5:	*4.9 (0.50, 3.6)*

• TURBO MODEL



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(1) Radiator lower cushion
(2) Radiator
(3) Radiator upper cushion
(4) Radiator upper bracket
(5) Clamp
(6) Radiator inlet hose
(7) Engine coolant reservoir tank cap
(8) Overflow hose
(9) Engine coolant reservoir tank
(10) Radiator fan shroud
(11) Radiator sub fan
(12) Radiator sub fan motor
(13) Radiator main fan
(14) Radiator main fan motor
(15) ATF hose clamp (AT model)
(16) ATF inlet hose A (AT model)
(17) ATF outlet hose A (AT model)
(18) ATF pipe (AT model)
(19) ATF inlet hose B (AT model)
(20) ATF outlet hose B (AT model)
(21) Radiator outlet hose
(22) Radiator drain plug
(23) Engine coolant filler tank
(24) Engine coolant filler tank cap
(25) Engine overflow hose
(26) Radiator under cover (AT model)
(27) Engine air breather hose

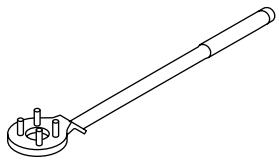
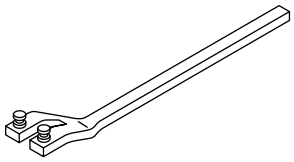
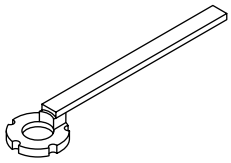
Tightening torque: N·m (kgf-m, ft-lb)
T1: 4.4 (0.45, 3.3)
T2: 7.5 (0.76, 5.5)
T3: 18 (1.8, 13.0)
T4: 3.4 (0.35, 2.5)
T5: 4.9 (0.50, 3.6)

C: CAUTION

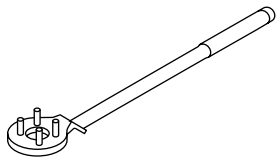
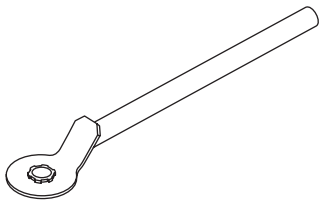
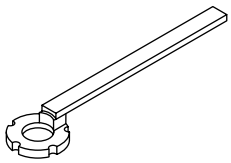
• Wear working clothing, including a cap, protective goggles, and protective shoes during operation.
• Remove contamination including dirt and corrosion before removal, installation or disassembly.
• Keep the disassembled parts in order and protect them from dust or dirt.
• Before removal, installation or disassembly, be sure to clarify the failure. Avoid unnecessary removal, installation, disassembly, and replacement.
• Be careful not to burn your hands, because each part in the vehicle is hot after running.
• Be sure to tighten fasteners including bolts and nuts to the specified torque.
• Place shop jacks or safety stands at the specified points.
• Before disconnecting electrical connectors of sensors or units, be sure to disconnect the ground cable from battery.

D: PREPARATION TOOL

1. NON-TURBO MODEL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-499977100	499977100	CRANK PULLEY WRENCH	Used for stopping crank pulley when loosening and tightening crank pulley bolts.
 ST18231AA010	18231AA010	CAM SPROCKET WRENCH	• Used for removing and installing cam sprocket. • Also the CAM SPROCKET WRENCH (499207100) can be used.
 ST-499207400	499207400	CAM SPROCKET WRENCH	Used for removing and installing cam sprocket. (Exhaust)

2. TURBO MODEL

ILLUSTRATION	TOOL NUMBER	DESCRIPTION	REMARKS
 ST-499977100	499977100	CRANK PULLEY WRENCH	Used for stopping crank pulley when loosening and tightening crank pulley bolts.
 ST-499977500	499977500	CAM SPROCKET WRENCH	Used for removing and installing intake cam sprocket.
 ST-499207400	499207400	CAM SPROCKET WRENCH	Used for removing and installing cam sprocket. (Exhaust)